



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1524G BYPASS RATIO: 11.1  
 UNIQUE ID NUMBER: 16FW111 PRESSURE RATIO ( $\pi_{00}$ ): 38.7  
 COMBUSTOR: TALON X  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 108.5

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.4	16.3	39.8	4.1
AS % OF ORIGINAL LIMIT	2.0	13.8	33.9	17.7
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			42.4	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			47.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			52.2	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			59.0	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.790	0.10	0.00	28.10	3.4
CLIMB OUT	85	2.2	0.650	0.10	0.10	21.20	2.8
APPROACH	30	4.0	0.230	0.10	1.60	11.10	2.4
IDLE	7	26.0	0.080	0.10	13.00	6.10	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			299	30	1719	4125	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.3	15.1	37.6	3.8
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.2-0.4	14.6-15.5	36.5-38.3	1.7-5.7

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.2-101.4
TEMPERATURE (K)	259.5-282
ABS HUMIDITY (kg/kg)	0.00081-0.00317

### FUEL

SPEC	Jet A
H/C	1.9
AROM (%)	16.4-18.1

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney Canada  
 TEST LOCATION: Mirabel Aerospace Centre - Quebec  
 TEST DATES: 15/01/2016-10/05/2016

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Data from Certification Report PWA-10061
2. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
3. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)